

## C. MARJORIE AELION

Associate Vice Chancellor for Research and Engagement  
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### EDUCATION

- Ph.D. University of North Carolina, Chapel Hill, Gillings School of Global Public Health,  
Department of Environmental Sciences and Engineering, 1988
- S.M.C.E. Massachusetts Institute of Technology  
Department of Civil Engineering, 1983
- B.S. University of Massachusetts Amherst, *Summa cum Laude*  
Department of Environmental Sciences, 1980

### EMPLOYMENT AND RESEARCH EXPERIENCE

- 2019-present Associate Vice Chancellor for Research and Engagement, University of Massachusetts  
Amherst
- 2009-2019 Dean, School of Public Health and Health Sciences, and Professor of Environmental  
Health Sciences, University of Massachusetts Amherst
- 2019 Visiting Professor, Macquarie University, Sydney, Australia
- 2006-2008 Associate Dean for Research, Arnold School of Public Health, University of South  
Carolina, Columbia
- 2003-2006 Graduate Director, Environmental Health Sciences Department, University of South  
Carolina, Columbia
- 2002 Visiting Professor, University of Wageningen, the Netherlands
- 2002 Visiting Professor, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland.
- 2001-2008 Professor, Environmental Health Sciences, University of South Carolina
- 1999-2000 Assistant Director, Marine Science Program, University of South Carolina
- 1997-2001 Associate Professor, Environmental Health Sciences, University of South Carolina
- 1991-1997 Assistant Professor, Environmental Health Sciences, University of South Carolina
- 1997 Visiting Scientist, Chelyabinsk State Technical University, Chelyabinsk, Russia
- 1995 Visiting Scientist, Irkutsk State University, Irkutsk, Russia
- 1995-2008 Associated Faculty, School of the Environment, University of South Carolina
- 1993-2008 Associated Faculty, Marine Science Program, University of South Carolina
- 1991-1994 Faculty Appointment, U.S. Geological Survey, Columbia, SC
- 1988-1991 Hydrologist, U.S. Geological Survey, Water Resources Division, Project Chief
- 1983-1984 Research Assistant in Peru, South America, NSF grant to R.B. Thomas

### AWARDS

- 2019 Fulbright Global Scholar; Macquarie University, Sydney, Australia; National &  
Kapodistrian University of Athens, Greece
- 2015 Exceptional Merit Award, University of Massachusetts Amherst
- 2014 Harriet Hylton Barr Distinguished Alumni Award for Commitment and Service to Public  
Health, Gillings School of Global Public Health, University of North Carolina
- 2009 Distinguished Alumnus Award, Department of Environmental Sciences and Engineering,  
Gillings School of Global Public Health, University of North Carolina
- 2002 Educational Foundation Research Award for Health Sciences, University of South Carolina
- 2002 Fulbright Scholar, University of Wageningen, Department of Soil Chemistry, the Netherlands

- 2002 International Agricultural Center Research Fellowship, Netherlands Ministry of Agriculture, Nature Management and Fisheries, the Netherlands
- 2001 Research Award for Outstanding Scholarly Research, Norman J. Arnold School of Public Health, University of South Carolina
- 1998 James A. Keith Excellence in Teaching Award, School of Public Health, USC
- 1993 National Science Foundation Presidential Faculty Fellow Award, 1 of 30 Awarded Nationally in all Scientific and Engineering Disciplines; \$500,000.
- 1988 Dissertation Fellowship, University of North Carolina
- 1984-1986 N.C. Board of Governors' Fellowship in Science and Technology, University of North Carolina
- 1980-1981 Fulbright Advanced Student Scholar Award, Institut d'Études Marines, Université de Bretagne Occidentale, Brest, France

**HONORS**

- 2015-2020 Member, Science Advisory Board, Scientific and Technological Awards, U.S. Environmental Protection Agency, Washington, DC
- 2018 Invited Member, Institute of International Education, Delegation to Cuba, Havana, Cuba
- 2018 & 2019 Invited External Reviewer doctoral dissertation, Macquarie University, Faculty of Science and Engineering, Sydney, Australia
- 2017-2018 Member, U.S. Department of Health and Human Services, Secretary's Advisory Committee. Stakeholder Engagement Subcommittee for developing and implementing the Healthy People 2030 initiative
- 2015-2018 Member, Science Advisory Board, Water Innovation Network for Sustainable Small Drinking Water Systems (WINSSS), EPA National Center
- 2011 Invited Member, American Public Health Association, Public Health Delegation to Cuba, Havana, Cuba
- 2006 Invited Member, National Academies, National Research Council, Vietnam Education Foundation, Fellows Review, Hanoi and Ho Chi Minh City, Vietnam
- 2006 Invited External Reviewer doctoral dissertation, University of Toronto, Department of Geology, Toronto, Canada
- 1993 Delta Omega Honorary Society, elected member

**LEADERSHIP PROGRAMS ATTENDED**

- Deans' Institute, Association of Academic Colleges and Universities, Washington DC, 2015
- Harvard Negotiation Institute, Harvard Law School, Cambridge, MA, 2014
- American Council on Education, 75<sup>th</sup> National Leadership Forum for Women Administrators, Washington, DC, 2010
- Higher Education Resource Services (HERS) Bryn Mawr Summer Institute, Bryn Mawr, PA, 2009

**OFFICES HELD**

- Member, Board of Directors (elected), Association of Schools and Programs of Public Health (ASPPH; formally ASPH), 2013-2015 and re-elected 2015-2017, 2017-2019
- Secretary/Treasurer (elected), ASPPH, 2013-2015 and re-elected 2015-2017, 2017-2019
- Chair, Finance Committee, ASPPH 2013-2019
- Member, Board Governance Committee, ASPPH, 2013-2019
- Member Task Force, Framing the Future, Second 100 Years of Education for Public Health, 2011-2015
- Vice-Chair, Global Health Core Competency Development Project and Co-Chair, Capacity Building Workgroup, ASPH, 2010-2011
- Member, Diversity Committee, ASPPH, 2009-2019
- Member, Education Committee, ASPPH, 2011-2019

Member, Global Health Committee, ASPPH, 2011-2019  
 Member, Executive Committee for the Institute for Applied Life Sciences, University of Massachusetts Amherst, 2013-present  
 Member, Advisory Board, Institute for Computation Biology, Biostatistics and Bioinformatics (ICB<sup>3</sup>), University of Massachusetts Amherst, 2013-2015  
 Member, Board of Massachusetts Biologics Laboratories, Inc. Worcester, MA, 2011-2015  
 Member (elected), Board of the Carolinas Society of Environmental Toxicology and Chemistry 2008  
 Member, Awards Committee, Society of Environmental Toxicology and Chemistry, 2007-2009  
 Member, Student Services Committee, Association for Environmental Engineering and Science Professors, 2005-2007  
 Program Coordinator, USC, EPA National Network for Environmental Management Studies Fellowship Program, 2002-2009  
 Past President, President, and President Elect, Mu chapter of Delta Omega Honorary Society, 1999-2002  
 Past President, President, S.C. Chapter of the Association for Women in Science 1997-1999  
 Secretary, S.C. Chapter of the Association for Women in Science 1996-1997  
 Member, American Society for Microbiology Selection Committee for Faculty Fellowship Program 1996-1998; Member, Selection Committee for Undergraduate Research Fellowship Program, 1994-1998  
 Treasurer, N.C. Chapter of the Association for Women in Science 1986-1987

**COUNCIL ON EDUCATION FOR PUBLIC HEALTH ACCREDITATION SITE VISITOR**

University of Washington School of Public Health, April 8-10, 2013  
 Oregon State University School of Public Health, Nov. 18-20, 2013  
 Université de Montréal, École de Santé Publique, Montreal, Canada, Nov. 2-3, 2015

**GRANTS AWARDED**

2010-2015 National Institutes of Health, National Institute of Environmental Health Sciences, R01, \$1,286,034 (direct costs). *Methods to Detect Maternal Exposures and Child Outcomes*. Multiple P.I.s, Aelion, Lawson, and McDermott  
 2009-2013 National Institutes of Health, National Institute of Environmental Health Sciences, R21, 1,230,625 (total costs). *Use of a Community-University Partnership to Eliminate Environmental Stressors*. P.I. Wilson, Co-Investigators/Consultants Aelion, Fraser-Rahim, Hardin, Svendsen, and Williams  
 2005-2009 National Institutes of Health, National Institute of Environmental Health Sciences, R01, \$1,365,638 (direct costs). *Methods to Detect Maternal Exposures and Child Outcomes*. Multiple P.I.s, McDermott, Aelion and Lawson  
 2007-2008 National Institutes of Health, National Institute of Environmental Health Sciences, R01, Supplement \$55,732 (direct costs). *Methods to Detect Maternal Exposures and Child Outcomes*. P.I. McDermott, Co-P.I.s Aelion and Lawson  
 2005-2008 USC Environmental Research Incentive Grant (ERIG), \$74,648. *Predicting biodegradation of phenanthrene using stable carbon isotopes: Incorporation of mathematical modeling*. P.I. Aelion; Co-P.I.s Flora, Prokopenko, Goni  
 1993-2008 National Oceanic and Atmospheric Administration, Office of Oceanic Research Programs, \$813,515, *Urbanization and Southeastern Estuarine Systems*. P.I. Aelion, Director, Porter  
 2000-2006 National Oceanic and Atmospheric Administration, \$960,000. *Role of Groundwater in the Biogeochemical Cycles of Carbon, Nitrogen and Phosphorus in SC and GA Coastal Waters*. Director Joye (UGa); P.I. Aelion, \$218,714  
 2000-2006 National Oceanic and Atmospheric Administration, \$617,359. *Development of a GIS-based Data Management and Spatial Modeling Program to Characterize Sources and*

- Effects of Natural Parameters and Anthropogenic Impacts to Coastal Ecosystems*. P.I. Porter; Co-P.I.s Aelion, Siewicki
- 2002-2006 Department of Energy, \$305,942. *Manufacture and Field Testing of Macroencapsulated Buffers for Enhanced Remediation of Environmental Contamination*, P.I. Aelion, Co-P.I. Flora
- 2005-2006 Dean's Faculty Scholars in Public Health Preparedness, Center for Public Health Preparedness, \$20,000. *Computer Module on Accidental and Planned Releases of Hazardous Chemicals*. P.I. Aelion
- 2005-2006 USC Environmental Research Incentive Grant (ERIG), \$149,961. *NIEHS SuperFund Basic Research Program Center Grants Competition: Community and Environmental Health Risks Associated with SuperFund Sites in Southeastern Coastal Systems*. P.I. Vena and Chandler, Co-P.I.s Aelion and others.
- 1999-2003 National Science Foundation, \$226,184. *Isotopic and Geochemical Analysis of Microbial Processes in Uncontaminated and Contaminated Ground Water and Sediment*. P.I. Aelion; Co-P.I. Stone
- 1999-2002 Hazardous Waste Management Research Fund, \$118,737 (direct costs). *Assessment of Natural Attenuation of Groundwater Contamination using Innovative Field Monitoring Techniques*. P.I. Aelion
- 1999-2001 National Science Foundation, \$318,255. *Acquisition of Irm-GC-MS Instrumentation for Global Biogeochemical Research*. P.I. Goni; Co-P.I.s Aelion, Thunell, Howell, Williams, Kohn, Prokopenko, Benner, Morris
- 1999-2001 S.C. Department of Health and Environmental Control, \$50,355 (direct costs). *S.C. Special Drinking Water/Groundwater Quality Study*. P.I. Aelion
- 1997-2001 Department of Energy, \$235,430. *Use of Microcapsules in In Situ Permeable Barriers for pH Control of Groundwater*. Aelion P.I.; Co-P.I. Flora
- 1999-2000 South Carolina Research Institute, \$21,300. *Watershed Nutrient Dynamics: Issues in Wastewater Allocation, Nonpoint Source Pollution Control, and Wetland Exchanges*. P.I. McKellar; Co-P.I.s Aelion, Porter, Tufford
- 1993-1999 National Science Foundation, \$500,000. *Biological Decontamination of Groundwater Aquifers*. P.I. Aelion
- 1998 Azur Environmental Grant Program, \$10,000. *Research Instrumentation Award*. P.I. Aelion
- 1995-1997 National Research Council, Collaborative Research in Sectoral Policy, Office of International Affairs, Office for Central Europe and Eurasia, \$2,200. Travel Grant to Russia for Collaborative Environmental Research. P.I. Aelion
- 1995 Lexington Medical Center, Lexington, S.C., \$4,500. *Environmental Assessment for Medical and Hazardous Waste*. P.I. Aelion
- 1993 NSF Faculty Enhancement Workshop, *Techniques in Water Resources Sciences*, \$1,500.
- 1993-1994 U.S. Geological Survey National Training Center, Denver, CO., 1993. P.I. Aelion
- 1993-1994 University of South Carolina, Instructional Innovation Grant, \$2080. P.I. Aelion
- 1992-1994 S.C. Department of Health and Environmental Control, and Hazardous Waste Management Research Fund, \$303,501 (direct costs). *In-Situ Stripping and Bioremediation of Petroleum-Derived Contamination in Soil and Groundwater*. P.I. Widdowson; Co-P.I.s Aelion, Ray, Reeves
- 1992 National Geographic Society, Committee for Research and Exploration, Geography of Fresh Water Initiative, \$23,162 (direct costs). *Assessment of Natural Process Technologies to Treat Fresh Water Contamination*. P.I. Aelion
- 1991-1994 Hazardous Waste Management Research Fund, \$114,257 (direct costs). *Field Demonstration of in situ Bioremediation of Subsurface Jet Fuel Contamination: Microbial Processes and Contaminant Fate, Hanahan, South Carolina*. P.I. Aelion

1991-1993 U.S. Environmental Protection Agency, \$30,000. *Use of Nitrate for Bioremediation of a JP-4 Jet Fuel Spill in a Shallow Aquifer at Hanahan, South Carolina*. P.I. Aelion

## PUBLICATIONS

### Books

Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds). 2010. *Environmental Isotopes in Biodegradation and Bioremediation*, Taylor and Francis, Boca Raton, FL.

Magar, V.S., T.M. Vogel, C.M. Aelion and A. Leeson (Eds.). 2001. *Innovative Methods in Support of Bioremediation*, Battelle Press, Columbus, OH.

### Peer-reviewed Articles and Book Chapters (names of students or former students are underlined)

Aelion, C.M., Davis, H.T. 2019. Blood lead levels in children in urban and rural areas: using multilevel modeling to investigate impacts of gender, race, poverty, and the environment. *Science of the Total Environment* 551-552:622-630. DOI:10.1016/j.scitotenv.2016.02.018.

Davis, H.T., C.M. Aelion, J. Liu, J.B. Burch. B. Cai. A.B. Lawson, S. McDermott. 2016. Potential sources and racial disparities in the residential distribution of soil arsenic and lead among pregnant women. *Science of the Total Environment* 551-552:622-630. DOI:10.1016/j.scitotenv.2016.02.018.

Hong, J., Y. Wang, S. McDermott, B. Cai, C.M. Aelion, J. Lead. 2016 The use of a physiologically-based extraction test to assess relationships between bioaccessible metals in urban soil and neurodevelopmental conditions in children. *Environmental Pollution* 212:9-17. DOI:10.1016/j.envpol.2016.01.0801.

Cai, B., A.B. Lawson, S. McDermott, C.M. Aelion. 2016. A Bayesian semiparametric approach with change points for spatial ordinal data. *Statistical Methods in Medical Research* 25:644-658. DOI: 10.1177/0962280212463415.

Aelion, C.M., C.O Airhihenbuwa, S. Alemagno, R.W. Amler, D.K. Arnett, A. Balas, S. Bertozzi, and others. 2016. The US Cancer Moonshot initiative. *Lancet* 17:e178-e180.

Aelion, C.M., A.C. Gubrium, F. Aulino, E.L. Krause, T.L. Leatherman. 2015. Bridging graduate education in public health and the liberal arts. *American Journal of Public Health*. 105:S1:S78-82. DOI:10.2105/AJPH.2014.302467.

Aelion, C.M., H.T. Davis, A.B. Lawson, B. Cai, S. McDermott. 2014. Temporal and spatial variation in residential soil metal concentrations: Implications for exposure assessments. *Environmental Pollution* 185:365-368. DOI:10.1016/j.envpol.2013.10.018.

Onicescu, G., A.B. Lawson, S. McDermott, C.M. Aelion, B. Cai. 2014. Bayesian importance parameter modeling of misaligned predictors: soil metal measures related to residential history and intellectual disability in children. *Environmental Science and Pollution Research* 21:10775-10786. DOI: 10.1007/s11356-014-3072-8.

Davis, H.T., C.M. Aelion, A.B. Lawson B. Cai, S. McDermott. 2014. Associations between land cover categories, soil concentrations of arsenic, lead and barium, and population race/ethnicity and socioeconomic status. *Science of the Total Environment* 490:1051-1056.

Carroll, R., A. Lawson, D. Voronca, C. Rotejanaprasert, J. Vena, C.M. Aelion, D. Kamen. 2014. Spatial environmental modeling of autoantibody outcomes among an African American population. *International Journal of Environmental Research and Public Health* 11:2764-2779. DOI:10.3390/ijerph110302764.

McDermott, S, W. Bao, C.M. Aelion, B. Cai, A.B. Lawson. 2014. Does the metal content in soil around a pregnant woman's home increase the risk for low birth weight for her infant? *Environmental Geochemistry and Health* 36:1191-1197. DOI 10.1007/s10653-014-9617-4.

McDermott S., W. Bao, X. Tong, B. Cai, A.B. Lawson, C.M. Aelion. 2014. Are different soil metals near the homes of pregnant women associated with mild and severe intellectual disability in children? *Developmental Medicine and Child Neurology* 56:888-897. DOI 10.1111/dmcn.12442.

- Cai, B., A.B. Lawson, S. McDermott and C.M. Aelion. 2013. A Bayesian semiparametric approach with change points for spatial ordinal data. *Statistical Methods in Medical Research* 0(0): 1-15. DOI:10.1177/0962280212463415.
- Aelion, C.M. H.T. Davis, A.B. Lawson, B. Cai and S. McDermott. 2013. Associations between soil lead concentrations and populations by race/ethnicity and income-to-poverty ratio in urban and rural areas. *Environmental Geochemistry and Health* 35:1-12. DOI 10.1007/s10653-012-9472-0.
- Aelion, C.M. H.T. Davis, A.B. Lawson, B. Cai and S. McDermott. 2012. Associations of estimated residential soil arsenic and lead concentrations and community-level environmental measures with mother-child health conditions in South Carolina. *Health and Place* 18:774-781.
- McDermott, S., W. Bao, C.M. Aelion, B. Cai and A. Lawson. 2012. When are fetuses and young children most susceptible to soil metal concentrations of arsenic, lead and mercury? *Spatial and Spatio-temporal Epidemiology* 3:265-272.
- Cai, B., A.B. Lawson, S. McDermott and C.M. Aelion. 2011. Variable selection for spatial latent predictors under Bayesian spatial model. *Statistical Modelling* 11:535-555.
- McDermott, S., J. Wu, B. Cai, A.B. Lawson and C.M. Aelion. 2011. Probability of intellectual disability is associated with soil concentrations of arsenic and lead. *Chemosphere* 84:31-38.
- Höhener, P. and C.M. Aelion. 2010. Chapter 1. Fundamentals of Environmental Isotopes and Their Use in Biodegradation. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Aelion, C.M. and S.A. Mancini. 2010. Chapter 5. Isotopes and Aerobic Degradation. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Aelion, C.M. and R.S. Norman. 2010. Chapter 10. Isotopic Labeling in Environmental and Biodegradation Studies. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Aelion, C.M. 2010. Chapter 11. Combined Use of Radiocarbon and Stable Carbon Isotopes in Environmental and Degradation Studies. In *Environmental Isotopes in Biodegradation and Bioremediation*, Aelion, C.M., P. Höhener, D. Hunkeler and R. Aravena (Eds.). Taylor and Francis, Boca Raton, FL.
- Liu, Y., S. McDermott, A.B. Lawson, and C.M. Aelion. 2010. The relationship between mental retardation and developmental delays in children and the levels of arsenic, mercury and lead in soil samples taken near their mother's residence during pregnancy. *International Journal of Hygiene and Environmental Health* 213:116-123. PMC2836425
- Kim, J.-I., A. Lawson, S. McDermott and C.M. Aelion. 2010. Bayesian spatial modeling of disease risk in relation to multivariate environmental risk fields. *Statistics in Medicine* 29:142-157. PMC3004226
- Aelion, C.M. and U. Warttinger. 2010. Sulfide inhibition of nitrate removal in coastal sediments. *Estuaries and Coasts* 33:798-803.
- Aelion, C.M. and M. Engle. 2010. Evidence for acclimation of N cycling to episodic N inputs in anthropogenically-affected intertidal salt marsh sediments. *Soil Biology and Biochemistry* 42:1006-1008.
- Aelion, C.M., M.R. Engle and H. Ma. 2010. Use of <sup>15</sup>N natural abundance and N species concentrations to assess N-cycling in constructed and natural coastal wetlands. *Applied and Environmental Soil Science* Doi:10.1155/2010/371259, pp.1-9.
- Zhen, H., S. McDermott, A. Lawson and C.M. Aelion. 2009. Are clusters of mental retardation correlated with clusters of developmental delay? *Geospatial Health*. 4:17-26.
- Aelion, C.M., H.T. Davis, Y. Liu, A.B. Lawson and S. McDermott. 2009. Validation of Bayesian kriging of arsenic, chromium, lead and mercury in surface soils based on internode sampling. *Environmental Science and Technology* 43:4432-4438. PMC2755059
- Davis, H.T., C.M. Aelion S. McDermott and A.B. Lawson. 2009. Identifying natural and anthropogenic sources of metals in urban and rural soils using GIS-based data, PCA, and spatial interpolation.

- Environmental Pollution* 157:2378-2385. PMC2694234
- Kim, J.-I., A.B. Lawson, S. McDermott and C.M. Aelion. 2009. Variable selection for spatial random field predictors under a Bayesian mixed hierarchical spatial model. *Spatial and Spatio-temporal Epidemiology* 1:95-102. PMC2838397
- Aelion, C.M. and U. Wartinger. 2009. Low sulfide concentrations affect nitrate transformations in freshwater and saline coastal retention pond sediments. *Soil Biology and Biochemistry* 41:735-741.
- Aelion C.M., H.T. Davis, S. McDermott and A.B. Lawson. 2009. Soil metal concentrations and toxicity: Associations with distances to industrial facilities and implications for human health. *Science of the Total Environment* 407:2216-2223. PMC2676061
- Aelion, C.M., H.T. Davis, J.R.V. Flora, B. Kirtland and M. Amidon. 2009. Application of encapsulation (pH-sensitive polymer and phosphate buffer macrocapsules): A novel approach to remediation of acidic ground water. *Environmental Pollution* 157:186-193.
- Davis, H.T. and C.M., Aelion. 2009. Chapter 5. Neurological Impacts of Exposure to High and Low Environmental Concentrations of Arsenic in Drinking Water and Soils. In *Environmental Health Risks: Lead Poisoning and Arsenic Exposure*. J.A. Gosselin and I.M. Fancher (Eds.). Nova Science Publishers, Inc., Hauppauge, NY, pp. 35-88.
- Aelion, C.M. and B.S. Jayasinghe. 2009. Chapter 7. Analytical Techniques to Measure Arsenic and Arsenic Species in Environmental and Biological Samples. In *Environmental Health Risks: Lead Poisoning and Arsenic Exposure*. J.A. Gosselin and I.M. Fancher (Eds.). Nova Science Publishers, Inc., Hauppauge, NY, pp. 107-127.
- Liu, L., B. Baker, J.R.V. Flora and C.M. Aelion. 2008. Kinetics of acidic macrocapsules in controlling the pH of groundwater. *Environmental Engineering Science* 25: 1-8.
- Aelion C.M., H.T. Davis, S. McDermott and A.B. Lawson. 2008. Metal concentrations in rural topsoil in South Carolina; Potential for human health impact. *Science of the Total Environment* 402:149-156. PMC2631568.
- Zhen, H., A. B. Lawson, S. McDermott, A. Pande Lamichhane and M. Aelion. 2008. A spatial analysis of mental retardation of unknown cause and maternal residence during pregnancy. *Geospatial Health* 2:173-182.
- Aelion, C.M. and J.R.V. Flora. 2008. Evaluating alkaline microcapsules for pH control and reductive dechlorination of trichloroethylene in sediment. *International Journal of Environmental Technology and Management* 9:3-19.
- Flora, J.R.V., B. Baker, D. Wybenga, H. Zhu and C.M. Aelion. 2008. Preparation of acidic and alkaline macrocapsules for pH control. *Chemosphere* 70:1077-1084. PMID:17854857.
- Aelion, C.M. and H.T. Davis. 2007. Use of a general toxicity test to predict heavy metal concentrations in residential soils. *Chemosphere* 67:1043-1049. PMID:7140621.
- Smalling, K.L. and C.M. Aelion. 2006. Reply to comments on "Biological and chemical transformation of atrazine in coastal aquatic sediments" by C. Marjorie Aelion and Kelly Smalling. *Chemosphere* 65:1442-1443.
- Smalling, K. and C.M. Aelion. 2006. Biological and chemical transformation of atrazine in coastal aquatic sediments. *Chemosphere* 62:188-196. PMID:16125751.
- Aelion, C.M. and K. Tuerk. 2005. Technology development for environmental problems of the Southeastern United States. *International Journal of Environmental Technology and Management* 5:183-202.
- Tuerk, K.J.S. and C.M. Aelion. 2005. Microbial nitrogen removal in a developing suburban estuary along the South Carolina coast. *Estuaries* 28:364-372.
- Ma, H. and C.M. Aelion. 2005. Ammonium production during microbial nitrate removal in soil microcosms from a developing marsh estuary. *Soil Biology & Biochemistry* 37:1869-1878.

- Kirtland, B.C., C.M. Aelion and P.A. Stone. 2005. Assessing in situ mineralization of recalcitrant organic compounds in vadose zone sediments using  $\delta^{13}\text{C}$  and  $^{14}\text{C}$  measurements. *Journal of Contaminant Hydrology* 76:1-18.
- Flora, J.R.V., C.M. Aelion, B. Baker, L. Liu and D.Q. Wybenga. 2005. Manufacture and testing of macroencapsulated buffers for pH control. Proceedings of the First International Conference on Environmental Science and Technology 2005 (II), W.G. Lyon, J. Hong and R.K. Reddy (Eds.). American Science Press, New Orleans, LA, pp. 45-50.
- Smalling, K. and C.M. Aelion. 2004. Distribution of atrazine into three chemical fractions: Impact of sediment depth and organic carbon content. *Environmental Toxicology and Chemistry* 23:1164-1171.
- Aelion, C.M. and B.C. Conte. 2004. Susceptibility of residential wells to VOC and nitrate contamination. *Environmental Science & Technology* 38:1648-1653.
- Aelion, C.M. and K. Tuerk. 2003. Major Environmental Problems facing the Southeastern Region. In: *Technology Transfer and Commercialization: Environment, Energy, and Economic Issues*. R.K. Jain and S. Kaur (Eds.), R.C. Byrd National Technology Transfer Center, Wheeling Jesuit University, Inc., TEPC-2003-6, Dec. 2003, pp. 25-94.
- Liu, L., J.R.V. Flora and C.M. Aelion. 2003. Theoretical analysis of the influence of process parameters on the use of an encapsulated phosphate buffer to control pH in a soil column. *Journal of Environmental Science and Health B Part A* 38:2825-2844.
- Kirtland, B.C., C.M. Aelion, P.A. Stone and D. Hunkeler. 2003. Isotopic and geochemical assessment of in situ biodegradation of chlorinated hydrocarbons. *Environmental Science & Technology* 37:4205-4212.
- Aelion, C.M. 2003. Soil Contamination Monitoring. In Theme 6.38 Environmental Monitoring, H.I. Inyang and J.L. Daniels, Honorary Theme Editors, in *Encyclopedia of Life Support Systems (EOLSS), Encyclopedia of Environmental and Ecological Sciences, Engineering and Technology Resources*, United Nations Educational, Scientific and Cultural Organization (UNESCO), Eolss Publishers Co., Ltd. Oxford, UK. [<http://www.eolss.net>].
- Liu, L., C.M. Rust, J.R.V. Flora and C.M. Aelion. 2002. Mathematical modeling of encapsulated buffer performance in sand columns. *ASCE Journal of Environmental Engineering* 128:1128-1138.
- Rust, C.M., C.M. Aelion and J.R.V. Flora. 2002. Laboratory sand column study of encapsulated buffer release for potential in situ pH control. *Journal of Contaminant Hydrology* 54:81-98.
- Liu, L.B., Flora, J.R.V. and Aelion, C.M. 2002. Sensitivity Analysis of Encapsulated Buffer Performance in Soil Columns. Proceeding of a Special Joint Conference of Universities Council on Water Resources (UCOWR), Environmental & Water Resources Institute of ASCE (EWRI), U.S. Army Corps of Engineers Institute for Water Resources (CEIWR), and National Ground Water Association (NGWA), Traverse City, MI, pp. 25-32.
- Aelion, C.M. and P.P. Mathur. 2001. Atrazine biodegradation to deisopropylatrazine and deethylatrazine in coastal sediment of different land uses. *Environmental Toxicology and Chemistry* 20:2411-2419.
- Kirtland, B.C., C.M. Aelion and M.A. Widdowson. 2001. Long-term AS/SVE for petroleum removal in low permeability Piedmont saprolite. *Journal of Environmental Engineering* 127:134-144.
- Aelion, C.M. and J.N. Shaw. 2000. Denitrification in South Carolina (USA) Coastal Plain aquatic sediments. *Journal of Environmental Quality* 29:1696-1703.
- Aelion, C.M. and B.C. Kirtland. 2000. Physical versus biological hydrocarbon removal during air sparging and soil vapor extraction. *Environmental Science & Technology* 34:3167-3173.
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- Aelion, C.M. and D.C. Cresci. 1999. Impact of land use on microbial transformations of atrazine. *Journal of Environmental Quality* 28:683-691.
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- Aelion, C.M., J.N. Shaw, M.A. Widdowson, R.P. Ray and H.W. Reeves. 1996. Simplified methods for monitoring contaminated ground water and soil vapor. *Journal of Soil Contamination* 5:225-241.
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- Aelion, C.M., M.A. Widdowson, R.P. Ray, H.W. Reeves and J.N. Shaw. 1995. Biodegradation, vapor extraction, and air sparging in low-permeability soils. In *In Situ Aeration: Air Sparging, Bioventing, and Related Remediation Processes*, Hinchee, R.E., Miller, R.N., and Johnson, P.C. (Eds.); Battelle Press, Columbus, OH; pp. 127-134.
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- Aelion, C.M. Spring 1994. Bioremediation: A Natural Process Technology to Treat Freshwater Contamination. *P<sub>2</sub>SC, Pollution Prevention in South Carolina II* (1):12-17.
- Aelion, C.M. May 1994. Between the Before and After: Degradation Needs More Proof than Before and After Sampling. *Soils*:38-42.
- Aelion, C.M. and S.C. Long. 1994. Heterogeneity in Contaminant Concentration and Microbial Activity in Subsurface Sediments. In *Hydrocarbon Bioremediation*, Hinchee, R.E., Alleman, B.C., Hoepfel, R.E. and Miller, R.N. (Eds.); Lewis Publishers, Boca Raton, FL; pp. 192-200.
- Robertson, J. F., C.M. Aelion and D.A. Vroblecky. 1993. Distribution of volatile organic compounds in soil vapor in the vicinity of the Defense Fuel Supply Point, Hanahan, South Carolina. U.S. Geological Survey, *Water-Resources Investigations Report* 93-4176; pp. 24.
- Bradley, P.M., C.M. Aelion and D.A. Vroblecky. 1992. Influence of environmental factors on denitrification in sediment contaminated with JP-4 jet fuel. *Ground Water* 30:843-848.
- Dobbins, D.C., C.M. Aelion and F.K. Pfaender. 1992. Subsurface, terrestrial microbial ecology and biodegradation of organic chemicals: A review. *Critical Reviews in Environmental Control* 22:67-136.
- Vroblecky, D.A., J.F. Robertson, M. Fernandez and C.M. Aelion. 1992. The permeable-membrane method of passive-gas collection. Book 11 of the Series, *Ground Water Management*. Water Well Journal Publishing Co., Dublin, OH; pp. 3-16.
- Aelion, C.M. and P.M. Bradley. 1991. Aerobic biodegradation potential of subsurface microorganisms from a jet fuel-contaminated aquifer. *Applied and Environmental Microbiology* 57:57-63.
- Widdowson, M.A. and C.M. Aelion. 1991. Application of a Numerical Model to the Performance and Analysis of an *In Situ* Bioremediation Project. In *In Situ Bioreclamation, Applications and Investigations for Hydrocarbon and Contaminated Site Remediation*, Hinchee, R.E. and Olfenbittel, R.F., Eds.; Butterworth-Heinemann: Stoneham, MA; pp. 227-244.
- Aelion, C.M., D.C. Dobbins and F.K. Pfaender. 1989. Adaptation of aquifer microbial communities to the biodegradation of xenobiotic compounds: Influence of concentration and preexposure. *Environmental Toxicology and Chemistry* 8:75-86.
- Swindoll, C.M., C.M. Aelion, O. Jiang, S.C. Long and F.K. Pfaender. 1988. Aerobic biodegradation of natural and xenobiotic compounds by subsurface microbial communities. *Environmental Toxicology and Chemistry* 7:291-299.
- Swindoll, C.M., C.M. Aelion and F.K. Pfaender. 1988. Influence of mineral and organic nutrients on aerobic biodegradation and the adaptation response of subsurface microbial communities. *Applied and Environmental Microbiology* 54:212-217.
- Aelion, C.M., C.M. Swindoll and F.K. Pfaender. 1987. Adaptation to and biodegradation of xenobiotic compounds by microbial communities from a pristine aquifer. *Applied and Environmental Microbiology* 53:2212-2217.
- Aelion, C.M. and S.W. Chisholm. 1985. Effect of temperature on growth and ingestion rate of *Favella* sp. *Journal of Plankton Research* 7:821-830.

## **ACADEMIC MEETINGS ATTENDED**

- The 11no Congreso Internacional de Educación Superior Universidad 2018, Havana, Cuba, Feb. 12-16, 2018
- Centennial Annual Meeting of the Association of Academic Colleges and Universities, Liberal Education, Global Flourishing, and the Equity Imperative, Washington, DC, Jan. 21-24, 2015
- The 99<sup>th</sup> Annual Meeting of the Association of Academic Colleges and Universities, The Quality of U.S. Degrees, Innovations, Efficiencies, and Disruptions – To What Ends, Atlanta, GA, Jan. 23-26, 2013
- 2012 NIH Summit on the Science of Eliminating Health Disparities, Building a Healthier Society, Integrating Science, Policy and Practice, National Harbor, MD, Dec. 17-19, 2012
- The 98<sup>th</sup> Annual Meeting of the Association of Academic Colleges and Universities, Shared Futures Difficult Choices, Reclaiming a Democratic Vision for College Learning, Global Engagement, and Success, Washington, DC, Jan. 25-28, 2012

## **INVITED CONFERENCE ORGANIZER, KEYNOTE, PLENARY SPEAKER, MODERATOR**

- Aelion, C.M. Invited Plenary Speaker, Challenges of Academic Public Health Research, Academic Regional Meeting in Asia: Global Conference on Public Health Education in the 21st Century, Taipei, Taiwan, Sept. 23-26, 2019.
- Aelion, C.M., Invited Session Moderator, No Margin, No Mission: Finance Issues in Higher Education, 2018 Association of Schools and Programs of Public Health Annual meeting, Alexandria, VA, March 8, 2018.
- Aelion, C.M. Invited Participant, MIT Path of Professorship Workshop, Cambridge, MA, Nov. 21, 2015; Nov. 19, 2016.
- Aelion, C.M. Invited Moderator, Faculty Development and Mentoring Undergraduate Public Health Students, Fourth Annual Undergraduate Education for Public Health Summit, New Orleans, LA, Nov. 15, 2014.
- Aelion, C.M. and P. Kostecki, Conference Directors, Sustainable Remediation 2011, State of the Practice. Green Chemistry, Human Health, Environmental Response. University of Massachusetts, Amherst, June 1-3, 2011.
- Aelion, C.M., Scientific Advisory Board, Sustainable Remediation 2011, State of the Practice. Green Chemistry, Human Health, Environmental Response. University of Massachusetts, Amherst, June 1-3, 2011.
- Aelion, C.M. and H. Henry, Invited Moderators, Session 13: Human Health Impacts and Issues. Sustainable Remediation 2011, State of the Practice. Green Chemistry, Human Health, Environmental Response. University of Massachusetts, Amherst, June 1-3, 2011.
- Aelion, C.M. Invited Keynote, The State of the Environment in the Southeastern United States. Tech Transfer 2003, Conference and Workshop, Innovative Technology Evaluation and Commercialization, U.S. Environmental Protection Agency, Kiawah Island, SC, July 28-29, 2003.
- Aelion, C.M., Invited Participant and Moderator, National Science Foundation's Second Invitational Conference on Reform in Mathematics and Science Education, Joining Forces: Spreading Successful Strategies. Washington, D.C., Feb. 23-25, 1995.

## **SESSION ORGANIZER AND CHAIR**

- Aelion, CM (Chair and Organizer) and H. Mielke (Co-Chair and Organizer), *Toxic substances in Urban and Rural Environments; Ecosystem Approaches to Human and Wildlife Consequences*. 30<sup>th</sup> Annual Meeting, Society of Environmental Toxicology and Chemistry, New Orleans, LA, Nov. 19-23, 2009.
- Aelion, CM (Chair and Organizer) and H. Mielke (Co-Chair and Organizer), *Toxic Substances in Rural and Urban Environments: Implications for Human Health*. 29<sup>th</sup> Annual Meeting, Society of Environmental Toxicology and Chemistry, Tampa, FL, Nov. 16-20, 2008.

- Aelion, C.M. (Co-Chair and Organizer) and B. Sherwood Lollar (Co-Chair and Organizer), *Microbial Ecology of Reductive Dechlorination and the pH Impact*. The Ninth International *In Situ* and On-Site Bioremediation Symposium, Baltimore, MD, May 7-10, 2007.
- Aelion, C.M. (Chair and Organizer) and B. Sherwood Lollar (Co-chair), *Tools/Techniques for Chlorinated Solvent Sites*. The Eighth International *In Situ* and On-Site Bioremediation Symposium, Baltimore, MD, June 6-9, 2005.
- Aelion, C.M. (Chair and Organizer), *Isotopic Techniques in Support of Bioremediation*. *In Situ* and On-Site Bioremediation, The Seventh International Symposium, Orlando, FL, June 2-5, 2003.
- Aelion, C.M. (Chair and Organizer), *Isotopic Approaches in Bioremediation*. *In Situ* and On-Site Bioremediation, The Sixth International Symposium, San Diego, CA, June 4-7, 2001.
- Aelion, C.M. (Chair) and S.R. Hutchins (Co-chair), *Laboratory and Field Investigations on the use of Alternative Electron Acceptors*. *In Situ* and On-Site Bioremediation, The Fifth International Symposium, San Diego, CA, April 19-22, 1999.
- Aelion, C.M. (Chair) and S.R. Hutchins (Co-chair), *Alternate Electron Acceptors*. *In situ* and On-Site Bioreclamation, The Fourth International Symposium, New Orleans, LA, April 28-May 1, 1997.
- Aelion, C.M. (Chair) and S. Pavlostathis (Co-chair), *Biodegradation of Contaminants in Soil and Sediment Systems*, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VIII, American Chemical Society, Birmingham, AL, Sept. 9-12, 1996.
- Aelion, C.M. (Chair), *Remediation of Soils*, NAFTA Workshop on Environmental Quality, Innovative Technology & Sustainable Development. Sponsored by the National Science Foundation and the U.S. State Department, Mexico City, Mexico, Feb. 1996.
- Aelion, C.M. (Chair) and S.R. Hutchins (Co-chair), *Alternate Electron Acceptors*. *In situ* and On-Site Bioreclamation, The Third International Symposium, San Diego, CA, April 24-27, 1995.
- Aelion, C.M. (Chair), *Microbially-Mediated Processes for Contaminant Removal*. Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VI, American Chemical Society, Atlanta, GA, Sept. 19-21, 1994.
- Aelion, C.M., Moderator for Session *Ground Water Management I*, American Water Resources Association, 2nd International Conference on Ground Water Ecology. Atlanta, GA, March 27-30, 1994.
- Aelion, C.M., Invited Participant and Moderator at the National Science Foundation's Invitational Conference on Reform in Mathematics and Science Education, Building the System: Making Science Education Work. Washington, D.C., Feb. 24-26, 1994.
- Dobbins, D.C. and C.M. Aelion (Symposium Co-chairs), *Special Applications of Microbiology in the Remediation of Contaminated Sites*. Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management V, American Chemical Society, Atlanta, GA, Sept. 27-29, 1993.
- Dobbins, D.C. and C.M. Aelion (Symposium Co-chairs), *Recent Advances in *In Situ* Bioremediation*, 92nd Annual Meeting of the American Society for Microbiology, New Orleans, LA, May 26-30, 1992.

#### **INVITED PARTICIPANT**

- Aelion, C.M., Boston University, Public Health Approaches to Stem Gun Violence, Boston, MA, Nov. 14, 2016.
- Aelion, C.M., Harvard University, The Second Century Symposium: Transforming Public Health Education, Boston, MA, Nov. 1, 2013.
- Aelion, C.M. Columbia University, Innovations in Public Health Education, New York, NY, June 3-4, 2013.
- Aelion, C.M. National Academies, National Research Council, Vietnam Education Foundation, Fellows Review, Hanoi and Ho Chi Minh City, Vietnam, Sept. 8-19, 2006.

- Aelion, C.M. Federal Agency Workshop on, Conceptual Model Development for Subsurface Reactive Transport Modeling of Inorganic Contaminants, Radionuclides, and Nutrients, USGS, USEPA, DOE, Albuquerque, NM, April 20-22, 2004.
- Aelion, C.M. National Science Foundation sponsored Forum for PYIs, NYIs, and PFFs in Environmental Engineering, Duke University, May 28-30, 1997.
- Aelion, C.M. Land Use-Coastal Ecosystems Study Planning Workshop, National Oceanic and Atmospheric Administration, S.C. Sea Grant Consortium, Savannah, GA, June 23-25, 1996.
- Aelion, C.M. NAFTA Workshop on Environmental Quality, Innovative Technology & Sustainable Development. Sponsored by the National Science Foundation and the U.S. State Department, Mexico City, Mexico, Feb. 1996.
- Aelion, C.M. National Science Foundation, Invitational Conference on Women & Science. Washington, DC, Dec. 13-15, 1995.

### **INVITED SEMINARS**

- Aelion, C.M. Navigating Your Next Steps: Life after Postdoctoral Fellowships. Translational Research Institute for Space Health (TRISH), Baylor College of Medicine and Massachusetts Institute of Technology, April 15, 2020.
- Aelion, C.M. Heavy Metals in Soils: Impacts on Children's Health. Department of Geology and Geoenvironment, National and Kapodistrian University of Athens, Athens, Greece, Oct. 23, 2019.
- Aelion, C.M. Blood Lead Levels in U.S. Children and Environmental Justice. School of Public Health, St. Luke's International University, Tokyo, Japan, Sept. 27, 2019.
- Aelion, C.M. Are low concentrations of heavy metals in the environment a health concern for children? Department of Environmental Sciences, Macquarie University, Sydney, Australia, May 7, 2019.
- Aelion, C.M. Associating soil metal concentrations with clusters of intellectual disabilities in children, using Bayesian kriging, Department of Civil and Environmental Engineering, Virginia Technical and State University, Blacksburg, VA, April 20, 2012.
- Aelion, C.M. Can residential soil metals affect children's health? Department of Civil and Environmental Engineering, University of Massachusetts, Amherst, MA, April 13, 2012.
- Aelion, C.M., J. Hiland, and J. Sherris. Careers in Global Health. Schools of Public Health Application Services, (SOPHAS) Association of Schools of Public Health Webinar, Oct. 12, 2011.
- Aelion, C.M. Potential associations between residential soil metals and intellectual disabilities in children. Università de Brescia, Facoltà di Medicina, Section of Occupational Health and Industrial Hygiene, Brescia, Italy, June 4, 2010.
- Aelion, C.M. Activities of the Association of Schools of Public Health. Association of Schools of Public Health in the European Region (ASPHER), Deans and Directors Retreat, Rennes, France, May 27, 2010.
- Aelion, C.M. Can we associate childhood outcomes with soil metal concentrations? Université de Provence, Equipe Chimie de l'Environnement Continental, Marseille, France, Delivered in French, Dec. 11, 2008.
- Aelion, C.M and S. McDermott. Using Epidemiology, Environmental Science, and Spatial Statistics in Maternal and Child Health, Department of Epidemiology and Biostatistics, University of South Carolina, Columbia, SC, Sept. 17, 2008.
- Aelion, C.M. Residential Soils, Metals and Mental Retardation: What do We Know about Where We Live? Science and Engineering Lecture Series, Jacksonville University, Jacksonville, FL, Feb. 28, 2008.
- Aelion, C.M. Marco, Micro and Nano-Technology for the Remediation of Chlorinated Hydrocarbons, Department of Civil and Environmental Engineering, Storrs, CT, Feb. 9, 2007.
- Aelion, C.M. Interdisciplinary Research and Teaching, Department of Civil and Environmental Engineering, Storrs, CT, Feb. 8, 2007.

- Aelion, C.M. *Assessing Biodegradation of Organic Contaminants in the Environment*, Department of Environmental Engineering, National University of Technology (VNU HCMC), Ho Chi Minh City, Vietnam, Sept. 15, 2006.
- Aelion, C.M. *Assessing Biodegradation of Organic Contaminants in the Environment*, Faculty of Environmental Engineering, National University of Civil Engineering, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Environmental Problems of the Southeastern United States*, Faculty of Environmental Engineering, National University of Civil Engineering, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Assessing Biodegradation of Organic Contaminants in the Environment*, Water Resources University, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Environmental Problems of the Southeastern United States*, Water Resources University, Hanoi, Vietnam, Sept. 11, 2006.
- Aelion, C.M. *Computer-Aided Management of Emergency Operations (CAMEO)*, USC Center for Public Health Preparedness, University of South Carolina, Columbia, SC, April 28, 2006.
- Aelion, C.M. *Biochemical Remediation*, EPSCoR Idea Speaker, Columbia College, Science Department, Columbia, SC, Feb. 28, 2005.
- Aelion, C.M. *Assessing In Situ Microbial Degradation of Pollutants in Contaminated sediments using Stable Isotopes ( $^{13}\text{C}$ ) and Naturally-Occurring Radiocarbon ( $^{14}\text{C}$ )*, University of South Carolina, Marine Science Program, Columbia, SC, Oct. 1, 2004.
- Aelion, C.M. *Use of isotopes for Biodegradation Assessment in Contaminated Ground Water and Sediment*. University of South Carolina Undergraduate Student Chemistry Club, Columbia, SC, Sept. 25, 2003.
- Aelion, C.M. *Quantifying PCE biodegradation using naturally-occurring radiocarbon*. EAWAG, Swiss Federal Institute for Environmental Science and Technology, Dübendorf, Switzerland, Dec. 16, 2002.
- Aelion, C.M. *Monitored natural attenuation of chlorinated hydrocarbons*. Department of Environmental Science, University of Wageningen, Wageningen, The Netherlands, Nov. 28, 2002.
- Aelion, C.M. *Biodegradation of atrazine and phenanthrene in coastal sediments*. School of Architecture, Civil and Environmental Engineering (ENAC), Institute of Environmental Science and Technology (ISTE), École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, July 22, 2002.
- Aelion, C.M. *Use of microcapsules in in situ pH control of groundwater*. Savannah River Technology Center, Environmental Restoration Group, Savannah River Site, New Ellenton, SC, June 12, 2002.
- Aelion, C.M. *Innovative techniques for assessing microbial degradation of organic contaminants in sediments*. Department of Exercise Science, USC, Columbia, SC, April 11, 2002.
- Aelion, C.M. *Radiolabel and Radiocarbon: Assessment of Biodegradation*. Savannah River Ecology Laboratory, University of Georgia, Aiken, SC, Feb. 21, 2002.
- Aelion, C.M. *Microbial degradation of organic contaminants in coastal sediments*. Department of Biology and Geology, USC Aiken, SC, Feb. 15, 2002.
- Aelion, C.M. *Biodegradation of PAHs in South Carolina coastal sediments*. Science Department, Columbia College, Columbia, SC, Feb. 4, 2002.
- Aelion, C.M. *Measuring the Role of Bacteria in Natural Attenuation of Contaminated Groundwater*, University of South Carolina, Department of Civil and Environmental Engineering, Columbia, SC, Nov. 23, 1998.
- Aelion, C.M. *Multiple Methods to Assess Physical and Biological Removal of Groundwater and Sediment Contamination*, Duke University, Department of Civil and Environmental Engineering, Durham, NC, Jan. 28, 1998.
- Aelion, C.M. *Research Opportunities at the USC School of Public Health*, Columbia College, Chi Beta Phi Honor Society, Department of Biological and Physical Sciences, Columbia, SC, Feb. 17, 1997.

- Aelion, C.M. *Alternative Methods for Assessing Bioremediation in Petroleum Contaminated Groundwater and Subsurface Sediment*, Virginia Polytechnic Institute and State University, Environmental Engineering and Chemical Engineering Departments, Blacksburg, VA, Oct. 30, 1996.
- Aelion, C.M. *Field Applications of Bioremediation*, S.C. Association for American Women in Science, Section Annual Meeting, Columbia, SC, Nov., 1994.
- Aelion, C.M. *Bioremediation and Contaminated Sites*, American Society for Industrial Hygiene, S.C./N.C. Annual Meeting, Myrtle Beach, SC, Oct. 13, 1994.
- Aelion, C.M., *Field Applications of Remediation*, University of South Carolina, Masters of Earth Resources Sciences Seminar Columbia, SC, April 7, 1994.
- Aelion, C.M. *Liabilities and Past Impacts* in University of South Carolina short course entitled *Hazardous Materials - Cradle to Grave*, Columbia, SC, July 21, 1992.

#### INVITED CONFERENCE PRESENTATIONS

- Ma, H. and C.M. Aelion. Potential rates of denitrification (DNF) and dissimilatory nitrate reduction to ammonium (DNRA) in surface and subsurface sediments of SC coast, USA. Podium presentation, 2004 Annual Summer meeting, American Society for Limnology and Oceanography, Savannah, GA, June 13-18, 2004.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Quantifying PCE biodegradation using *in situ* respiration and isotopic analysis. Podium presentation, *In Situ* and On-Site Bioremediation, The Seventh International Symposium, Orlando, FL, June 2-5, 2003.
- Lopez-de-Victoria, G., K. Tuerk, B. Hoover and C.M. Aelion. Microbial denitrification rates in a suburban estuary along the South Carolina coast. Podium presentation, American Society for Limnology and Oceanography, Aquatic Sciences Meeting, Salt Lake City, UT, Feb. 8-14<sup>th</sup>, 2003.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Assessment of natural attenuation of groundwater contamination using innovative field monitoring techniques. Poster presentation, 11<sup>th</sup> South Carolina Environmental Symposium, Myrtle Beach, SC, Nov. 6-8, 2002.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Radiocarbon and stable isotope assessment of *in situ* PCE bioremediation. Podium presentation, *In Situ* and On-Site Bioremediation, Sixth International Symposium, San Diego, CA, June 4-7, 2001.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Innovative Methods for Measuring Bacterial Removal of Soil and Groundwater Contamination. Poster presentation, 8<sup>th</sup> South Carolina Environmental Symposium, Pawleys Island, SC, Oct. 13-15, 1999.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Soil gas and isotopic assessment of CO<sub>2</sub> and CH<sub>4</sub> for *in situ* anaerobic petroleum biodegradation. Poster presentation, 7<sup>th</sup> South Carolina Environmental Symposium, Pawleys Island, SC, Nov. 11-13, 1998.
- Aelion, C.M. Impact of land use on nitrate removal by sediment bacteria from the Coastal Plain of South Carolina. Poster presentation, 7<sup>th</sup> South Carolina Environmental Symposium, Pawleys Island, SC, Nov. 11-13, 1998.
- Tufford, D.L., H.N. McKellar, C.M. Aelion, M.H. Wahl, C.W. Corbett and D.E. Porter. Mechanisms of surface and shallow ground water hydrology and nutrient fluxes into two high salinity estuaries. Podium presentation, Conference on Southeast Coastal Ocean Research (SECOR), Savannah, GA, April 7-10, 1998.
- Aelion, C.M., B.C. Kirtland and P.A. Stone. Radiocarbon assessment of aerobic petroleum bioremediation in the vadose zone and groundwater at an AS/SVE site. Poster presentation, 6<sup>th</sup> South Carolina Environmental Symposium, Myrtle Beach, SC, Oct. 26-28, 1997.
- Aelion, C.M. and B.C. Kirtland. Petroleum contamination removal using air sparging/soil vapor extraction and bioremediation. Poster presentation, 5<sup>th</sup> South Carolina Environmental Symposium, Myrtle Beach, SC, Oct. 2-4, 1996.

- Aelion, C.M., B.C. Kirtland and P. Wei. Comparison of Laboratory and In Situ Indicators of Biodegradation of Petroleum Hydrocarbons in low permeability Soil. Podium presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VIII, American Chemical Society, Birmingham, AL, Sept. 9-12, 1996.
- Aelion, C.M. and B.C. Kirtland. Petroleum mass removal rates in the Appalachian Piedmont using air sparging/soil vapor extraction and bioremediation. Poster presentation, South Carolina Environmental Law and Technology Conference, Greenville, SC, May 23-24, 1996.
- Aelion, C.M., J.N. Shaw and P. Raj. Bacterial removal of nitrate in a shallow coastal aquifer. Poster presentation, South Carolina Environmental Law and Technology Conference, Greenville, SC, May 23-24, 1996.
- Aelion, C.M. and B.C. Kirtland. Vadose zone O<sub>2</sub> and CO<sub>2</sub> as indicators of *in situ* bioremediation in the Appalachian Piedmont. Podium presentation, Division of Environmental Chemistry 211th American Chemical Society National Meeting, New Orleans, LA, March 24-29, 1996.
- Raj, P. and C.M. Aelion. Denitrification in coastal freshwater stream sediments. Poster presentation, Estuarine Research Federation, Corpus Christi, TX, Nov. 12-15, 1995.
- Wahl, M., H. McKellar, T. Williams and M. Aelion. Patterns of nutrient loading in forested and urbanized coastal streams. Podium presentation, Estuarine Research Federation, Corpus Christi, TX, Nov. 12-15, 1995.
- Kawaguchi, T., A.J. Lewitus, M. Wahl, C.M. Aelion and H. McKellar. Can urbanization limit iron availability to estuarine algae? Podium presentation, Estuarine Research Federation, Corpus Christi, TX, Nov. 12-15, 1995.
- Wahl, M., H. McKellar, T. Williams and M. Aelion. Water table dynamics and nutrient chemistry in forested and urbanized coastal streams. Poster presentation, Estuarine Research Federation, Corpus Christi, TX, Nov. 12-15, 1995.
- Aelion, C.M., R.P. Ray, M.A. Widdowson, H.W. Reeves and J.N. Shaw. Soil vapor and off-gas sampling of a petroleum-contaminated aquifer during soil venting and bioremediation. Podium presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VI, American Chemical Society, Atlanta, GA, Sept. 19-21, 1994.
- Aelion, C.M. Hydraulic containment and *in situ* bioremediation for petroleum hydrocarbon contamination. Poster presentation, 1993 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Greenville, SC, Oct. 12, 1993.
- Ray, R.P., H.W. Reeves, C.M. Aelion and M.A. Widdowson. *In Situ* stripping and bioremediation of petroleum-derived contamination. Poster presentation, 1993 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Greenville, SC, Oct. 12, 1993.
- Aelion, C.M., M.A. Widdowson, R.P. Ray and H.W. Reeves. *In situ* air sparging and bioremediation in a saprolitic aquifer contaminated with gasoline. Podium presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management V, American Chemical Society, Atlanta, GA, Sept. 27-29, 1993.
- Aelion, C.M. Cleaning up the past: Issues in site remediation. Podium presentation, 1992 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Columbia, SC, Oct. 20, 1992.
- Widdowson, M.A., R.P. Ray, H.W. Reeves and C.M. Aelion. *In Situ* stripping and bioremediation of petroleum-derived contamination in soil and groundwater. Podium presentation, 1992 Joint Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Columbia, SC, Oct. 20, 1992.
- Aelion, C.M. and D.C. Dobbins. *In situ* bioremediation: Problems and progress. Podium presentation, 92nd Annual Meeting of the American Society for Microbiology, New Orleans, LA, May 26-30, 1992.
- Aelion, C.M. Field demonstration of *in situ* bioremediation of subsurface jet fuel contamination: Microbial processes and contaminant fate, Hanahan, South Carolina. Podium presentation, 1991 Joint



Conference on Hazardous Waste Reduction, Hazardous Waste Management Research Fund, Columbia, SC, Sept. 19, 1991.

Aelion, C.M., P.M. Bradley and P.B. McMahon. Potential for *in situ* bioremediation of a jet fuel spill near Charleston, South Carolina. Podium presentation, 1990 Annual Meeting of the American Association for the Advancement of Science, New Orleans, LA, Feb. 15-20, 1990.

Aelion, C.M. Ability of microbial communities from an uncontaminated aquifer to degrade organic pollutants. Podium presentation, University of South Carolina, Department of Environmental Health Sciences, Spring Seminar Series, Mar. 20, 1989.

### **CONTRIBUTED CONFERENCE PRESENTATIONS**

Taylor, M.P., X. Liu, C.M. Aelion. Temporal and spatial statistical analysis of children's blood lead exposures in Australian oldest lead mining town of Broken Hill. American Geophysical Union Fall Meeting 2019, San Francisco, CA, Dec. 9-13, 2019.

Miller, M., D. Harris, T. Huf and C.M. Aelion. Transformation within a Master Plan: Public health education research & facilities planning. Society for College and University Planning, 2015 North Atlantic Regional Conference, Providence, RI, April 14, 2015.

Aelion, C.M., H.T. Davis and S. McDermott. Surface soil concentrations of arsenic, barium and lead and associations with land cover and population race/ethnicity and socioeconomic status. American Public Health Association 142<sup>nd</sup> Annual Meeting and Exposition, New Orleans, LA, Nov. 15-19, 2014.

Davis, H.T., J. Liu, C.M. Aelion, B. Cai, J.B. Burch and S. McDermott. Association between exposure to lead in soils and preterm birth in Medicaid Women in South Carolina. Society for Epidemiologic Research 46<sup>th</sup> Annual Meeting, Boston, MA, June 18-21, 2013.

Davis, H.T., C.M. Aelion, J. Liu and S. McDermott. Association between exposure to lead in soils and preterm birth in Medicaid Women in South Carolina. Poster presentation, 26<sup>th</sup> Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER), Boston, MA, June 17-18, 2013.

Davis, H.T., C.M. Aelion and S. McDermott. Racial disparities in the potential for exposure to arsenic and lead in soils for a Medicaid population of mothers in South Carolina, USA. International Society for Environmental Epidemiology 25<sup>th</sup> Conference, Basel, Switzerland, Aug. 19-23, 2013.

Aelion, C.M. and H.T. Davis. An aggregate analysis of kriged residential soil arsenic and lead concentrations and mother-child measures in low-income populations. Poster presentation, 140<sup>th</sup> Annual Meeting, American Public Health Association, San Francisco, CA, Oct. 27-31, 2012.

Aelion, C.M. and H.T. Davis. Associations of mother-child measures and neighborhood characteristics in a low-income population with spatially interpolated arsenic, lead, and mercury soil concentrations. Poster presentation, 24<sup>th</sup> Annual Conference, International Society for Environmental Epidemiology, Columbia, SC, Aug. 26-30, 2012.

Aelion, C.M. and H.T. Davis. Associations of mother-child health measures with spatially-interpolated soil lead concentrations in residential soils. Poster presentation, 32<sup>nd</sup> Annual Meeting, Society of Environmental Toxicology and Chemistry, Boston, MA, Nov. 13-17, 2011.

Onicescu, G., A.B. Lawson, S. McDermott, C.M. Aelion, B. Cai. Cumulative spatial and temporal exposure modeling of soil metals and developmental disabilities in children. Poster presentation, GEOMED 2011, Victoria, British Columbia, Canada, Oct. 20-22, 2011.

Aelion, C.M. and H.T. Davis. Geostatistical and factor analysis of metal concentrations in urban and rural residential soils with potential for human health impacts. Poster presentation, 30<sup>th</sup> Annual Meeting, of the Society of Environmental Toxicology and Chemistry, New Orleans, LA, Nov. 19-23, 2009.

Aelion, C.M., H.T. Davis, S. McDermott and A.B. Lawson. Metal concentrations in rural soils; Is there a potential for human health impact? Podium presentation, 29<sup>th</sup> Annual Meeting of the Society of Environmental Toxicology and Chemistry, Tampa, FL, Nov. 16-20, 2008.

- Aelion, C.M., H.T. Davis, H. Zhen, S.W. McDermott and A.B. Lawson. Metal concentrations in residential soils. Poster presentation, 28th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Milwaukee, WI, Nov. 11-15, 2007.
- Aelion, C.M. and U. Warttinger. Nitrate removal in coastal retention ponds sediments of high sulfate and sulfide concentration. Poster presentation, 28th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Milwaukee, WI, Nov. 11-15, 2007.
- Aelion, C.M, H.T. Davis and J.V.R. Flora. Macroencapsulated buffers: A novel remediation technology for the treatment of acidic ground water. Poster presentation, National Ground Water Association, 2007 Ground Water Summit. Albuquerque, NM, April 29-May 3, 2007.
- Aelion, C.M., H.T. Davis and J.R.V. Flora, Field application of macroencapsulation for groundwater remediation. Poster presentation, Joint Carolina and Southeast SETAC Meeting, Athens, GA, April 11-13, 2007.
- Engle, M. and C.M. Aelion. Can the natural abundance of  $^{15}\text{N}$  be used to identify nitrogen sources in golf course retention ponds? Poster presentation, Carolina and Southeast SETAC Meeting, Athens, GA, April 11-13, 2007.
- Warttinger, U. and C.M. Aelion. Role of sulfur species in denitrification in coastal retention ponds. Poster presentation, Joint Carolina and Southeast SETAC Meeting, Athens, GA, April 11-13, 2007.
- Siewicki, T.C., S. McDaniel, T.C. Pullaro, E. Boyce, J.W. Daugomah and M. Aelion. Water quality and predicted loading of contaminants in South Carolina coastal ponds. Podium presentation, North American Lake Management Society, 15<sup>th</sup> Annual Southeastern Lake and Watershed Management Conference, Columbus, GA, March 8-11, 2006.
- Aelion, C.M. and H. Ma. Sources of ammonium and nitrate in soil and surface water from an undeveloped marsh, and a golf course retention pond and its adjacent marsh. Poster presentation, ASLO, AGU and TOS Ocean Sciences 2006, Honolulu, HI, Feb. 20-24, 2006.
- Aelion, C.M. and H.T. Davis. Use of Microtox 7 to predict heavy metal concentrations in urban residential soils. Poster presentation, 26th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD, Nov. 13-17, 2005.
- Kirtland, B.K., M. Aelion, J. Flora and M. Engle. Laboratory testing of macro-encapsulated buffers for pH control of groundwater from the Savannah River National Laboratory. Poster presentation, 105th General Meeting of the American Society for Microbiology, Atlanta, GA, June 5-9, 2005.
- Engle, M., M. Aelion and B.K. Kirtland. Groundwater pH remediation using macroencapsulated buffer. Poster presentation, Discovery Day 2005, Columbia, SC, April 22, 2005.
- Thornton, P.H. and C.M. Aelion. Use of a General Toxicity Test to Predict Heavy Metal Concentrations in Soils: Implications for Explaining High Incidences of Developmental Delays/Mental Retardation in Children. Podium Presentation, Graduate Student Day, Columbia, SC, April 6, 2005.
- Flora, J.R.V., C.M. Aelion, B. Baker, L. Liu and D. Wybenga. Manufacture and testing of macroencapsulated buffers for pH control. Podium presentation, 1<sup>st</sup> International Conference on Environmental Science and Technology, New Orleans, LA, Jan. 23-26, 2005.
- Kloot, R.W., B. Radakovich and C.M. Aelion. Getting a handle on water quality: Alternatives for limited-resource watershed managers. Podium presentation, 2004 annual conference of the Soil and Water Conservation Society, St. Paul, MN, July 24-28, 2004.
- Smalling, K. and C.M. Aelion. Microbial degradation of atrazine in coastal sediments: distribution of metabolites into aqueous and basic fractions. Poster presentation, 19<sup>th</sup> Annual International Conference on Soils, Sediments and Water, Amherst, MA, Oct. 20-23, 2003.
- Wybenga, D.Q., J.R.V. Flora and C.M. Aelion. Macroencapsulated buffers for pH control. Podium presentation, ERTEC 03, Environmental Restoration Technology End-User Conference, Columbia, SC, June 3-5, 2003.

- Smalling, K. and C.M. Aelion. Sorption and biodegradation account for the majority of atrazine added to coastal sediment microcosms. Podium presentation, 2003 Carolinas SETAC (Society of Environmental Toxicology and Chemistry) Annual Meeting, Charleston, SC, April 2-4, 2003.
- Tuerk, K., C.M. Aelion and G. Lopez de Victoria. Nitrogen cycling in aquatic coastal sediments: Bacterial removal of nitrate and generation of ammonium. Podium presentation, 2003 Carolinas SETAC, Society of Environmental Toxicology and Chemistry Annual Meeting, Charleston, SC, April 2-4, 2003.
- Pullaro, T.C., T.C. Siewicki, W. Pan, S.A. McDaniel, J.W. Daugomah, and C.M. Aelion. Preliminary modeling of nutrient and fecal coliform loading into small, urbanized estuarine systems. Poster presentation, Southeast Coastal Ocean Science Conference, Charleston, SC, Jan. 27-29, 2003.
- Smalling, K.L. and C.M. Aelion. Mineralization of  $^{14}\text{C}$ -atrazine in coastal sediments: impacts of sorption to humic substances. Poster presentation, 23<sup>rd</sup> Annual Meeting of the Society of Environmental Toxicology and Chemistry, Salt Lake City, UT, Nov. 16-20, 2002.
- Liu, L.B., J.R.V. Flora and C.M. Aelion. Sensitivity analysis of encapsulated buffer performance in soil columns. Podium presentation, A Special Joint Conference of Universities Council on Water Resources (UCOWR), Environmental & Water Resources Institute of ASCE (EWRI), U.S. Army Corps of Engineers Institute for Water Resources (CEIWR), and National Ground Water Association (NGWA), Traverse City, MI, July 23-26, 2002.
- Conte, B.C., C.M. Aelion and T.J. Miller. Identifying factors to assess susceptibility to ground-water contamination in residential wells located near TRI facilities. Podium presentation, 53<sup>rd</sup> Annual Meeting of the National Ground Water Association, Nashville, TN, Dec. 7-9, 2001.
- C.M. Rust, C.M. Aelion and J.R.V. Flora. Evaluation of pH as a limiting factor for TCE dechlorination in Savannah River Site sediment. Poster presentation, 22<sup>nd</sup> Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, MD, Nov. 11-15, 2001.
- Rust, C.M., C.M. Aelion and J.R.V. Flora. Subsurface bacteria metabolize TCE in groundwater; impact of pH. Podium presentation, Annual Meeting of the S.C. Academy of Sciences, Greenwood, SC, April 6, 2001.
- Tidwell, A.D. and C.M. Aelion. Microbial mineralization and transformation of phenanthrene in coastal sediment microcosms. Podium presentation, Annual Meeting of the Society for Environmental Toxicology and Chemistry, Nashville, TN, Nov. 12-16, 2000.
- Rust, C.M., C.M. Aelion and J.R.V. Flora. Encapsulation technology control pH in flow-through columns during denitrification. Podium presentation, Annual Meeting of the American Chemical Society, Washington, DC, Aug. 20-24, 2000.
- Aelion, C.M. and B.C. Conte. Assessing susceptibility of groundwater to land applied contaminants. Poster presentation, Annual Meeting of the American Geophysical Union, Washington, DC, May 30-June 3, 2000.
- Tidwell, A.D. and C.M. Aelion. Microbial removal of phenanthrene from coastal sediments. Podium presentation, USC Graduate Student Day, Columbia, SC, April 5, 2000.
- Rust, C.M. and C.M. Aelion. Controlling pH in denitrifying flow-through columns using encapsulated phosphate buffer. Podium presentation, USC Graduate Student Day, Columbia, SC, April 5, 2000.
- Tidwell, A.D. and C.M. Aelion. Microbial removal of phenanthrene from coastal sediments. Podium presentation, Annual Meeting of the S.C. Academy of Sciences, Greenwood, SC, April 30, 1999.
- Kirtland, B.C., C.M. Aelion and P.A. Stone. Soil gas and isotopic assessment of anaerobic petroleum biodegradation. Poster presentation, 5th International Symposium, In Situ and On-Site Bioremediation, San Diego, CA, April 19-22, 1999.
- Patel, P. and C.M. Aelion. Deisopropylatrazine and Deethylatrazine production by subsurface microbes exposed to Atrazine. Podium presentation, 8<sup>th</sup> Annual Meeting of the Carolinas Regional Society of Environmental Toxicology and Chemistry, Columbia, SC, April 9-10, 1999.

- Rust, C.M. and C.M. Aelion. Control of pH with encapsulated buffer during denitrification in subsurface soils. Podium presentation, 8<sup>th</sup> Annual Meeting of the Carolinas Regional Society of Environmental Toxicology and Chemistry, Columbia, SC, April 9-10, 1999.
- Tidwell, A. and C.M. Aelion. Microbial mineralization of Phenanthrene in coastal sediments. Presentation, 8<sup>th</sup> Annual Meeting of the Carolinas Regional Society of Environmental Toxicology and Chemistry, Columbia, SC, April 9-10, 1999.
- Patel, P. and C.M. Aelion. Microbial transformation products of Atrazine in estuarine sediments. Poster presentation, 19<sup>th</sup> Annual Meeting of the Society of Environmental Toxicology and Chemistry, Charlotte, NC, Nov. 15-19, 1998.
- Rust, C.M. and C.M. Aelion. Control of pH with encapsulated buffer during denitrification in subsurface soils. Poster presentation, 19<sup>th</sup> Annual Meeting of the Society of Environmental Toxicology and Chemistry, Charlotte, NC, Nov. 15-19, 1998.
- Flora, J.R.V., B. Vanukuru, C.M. Aelion and M.F. Petrou. pH control during denitrification. Podium presentation, First Consumer and Diversified Products Conference, Controlled Release Society, Inc., Las Vegas, NV, June 21-24, 1998: 287-288.
- Kirtland, B.C. and C.M. Aelion. Monitoring and modeling vadose zone oxygen and carbon dioxide to estimate biodegradation during air sparging/soil vapor extraction. Poster presentation, 98<sup>th</sup> Annual Meeting of the American Society for Microbiology, Atlanta, GA, May 17-21, 1998.
- Rust, C.M. and C.M. Aelion. Denitrification in soil from an aquifer beneath the Savannah River Site. Podium presentation, USC Graduate Student Day, Columbia, SC, April 3, 1998.
- Aelion, C.M. and D.C. Cresci. Microbial mineralization of <sup>14</sup>C atrazine in estuarine sediments. Poster presentation, 97<sup>th</sup> Annual Meeting of the American Society for Microbiology, Miami Beach, FL, May 4-8, 1997.
- Aelion, C.M., B.C. Kirtland and P.A. Stone. Monitoring *in situ* biodegradation of hydrocarbons using radiocarbon. Podium presentation, Fourth International In Situ and On-Site Bioreclamation Symposium, New Orleans, LA, April 28-May 1, 1997.
- Aelion, C.M., B.C. Kirtland and P.A. Stone. Isotopic assessment of petroleum bioremediation in soil and groundwater using radiocarbon. Poster presentation, Industrial & Engineering Chemistry Special Symposium, Emerging Technologies in Hazardous Waste Management VIII, American Chemical Society, Birmingham, AL, Sept. 9-12, 1996.
- Porter, D.E., F.J. Vernberg, W. Vernberg, T. Chandler, H. McKellar, M. Aelion, T. Kawaguchi, G. Scott, M. Fulton, T. Siewicki and B. Jones. Multidisciplinary ecosystem assessment of anthropogenic influences on localized coastal estuaries: A research and management approach. Poster presentation, 5<sup>th</sup> South Carolina Environmental Symposium, Myrtle Beach, SC, Oct. 2-4, 1996.
- Porter, D.E., F.J. Vernberg, W. Vernberg, T. Chandler, H. McKellar, M. Aelion, T. Kawaguchi, G. Scott, M. Fulton, T. Siewicki, B. Jones and D. Edwards. Integrated ecosystem assessment of anthropogenic influences on localized salt-marsh estuaries: A research and management approach. Podium presentation, 3<sup>rd</sup> Marine and Estuarine Shallow Water Conference, Atlantic City, NJ. Dec. 1996.
- Aelion, C.M., R.P. Ray, M.A. Widdowson, J.N. Shaw and Y. Wei. Microbial activity during soil vapor extraction and air sparging in the S.C. Piedmont. Poster presentation, 95<sup>th</sup> Annual Meeting of the American Society for Microbiology, Washington, D.C., May 21-25, 1995.
- Aelion, C.M., R.P. Ray, M.A. Widdowson, H.W. Reeves and J.N. Shaw. Gas monitoring for subsurface microbial activity and hydrocarbon contamination during soil venting and bioremediation. Poster presentation, Third International In Situ and On-Site Bioreclamation Symposium, San Diego, CA, April 24-27, 1995.
- Widdowson, M.A., C.M. Aelion, R.P. Ray and H.W. Reeves. A pilot study of soil vapor extraction at a Piedmont UST site. Podium presentation, Third International In Situ and On-Site Bioreclamation Symposium, San Diego, CA, April 24-27, 1995.

- Sullins, N.R. and C.M. Aelion. CO<sub>2</sub> recovery and toluene utilization in contaminated aquifer sediments. Poster presentation, 94th Annual Meeting of the American Society for Microbiology, Las Vegas, NV, May 23-27, 1994.
- Wahl, M., C.M. Aelion, H. McKellar, T. Kawaguchi and T. Williams. Nutrient loading, and ground water and surface water interactions in coastal South Carolina blackwater streams. Podium presentation, 2nd International Conference on Ground Water Ecology, American Water Resources Association, Atlanta, GA, March 27-30, 1994.
- Kawaguchi, T., C.M. Aelion, M.H. Wahl and H.N. McKellar. Reduction of organically-bound ferrous iron (Org.-Fe(II)) - A potential effect of coastal urbanization? Poster presentation, Southeastern Estuarine Research Society Spring meeting, Jekyll Island, GA, March 10-12, 1994.
- N.R. Sullins and C.M. Aelion. Microbial profile within a petroleum contaminated aquifer. Podium presentation, NC & SC Branches of American Society for Microbiology, Charlotte, NC, Nov. 5-6, 1993.
- Widdowson, M.A., R.P. Ray, H.W. Reeves, C.M. Aelion and K.D. Holbrooks. Investigation of soil venting-based remediation at a UST site in the Appalachian Piedmont. Podium presentation, ASTM Symposium of Bioremediation, Fort Worth, TX, Oct. 14-15, 1993.
- R.P. Ray, M.A. Widdowson, H.W. Reeves and C.M. Aelion. Soil sampling and laboratory testing for SVE/Sparging in Piedmont soils: Measurements of spatial variation and field confirmation. Podium presentation, 1993 American Geophysical Union, MSA, GS Joint Spring Meeting, Baltimore, MD, May 24-28, 1993.
- Long, S.C., C.M. Aelion and F.K. Pfaender. A comparison of decane and toluene metabolism in uncontaminated and jet-fuel contaminated aquifer sediment microcosms. Poster presentation, 93th Annual Meeting of the American Society for Microbiology, Atlanta, GA, May 16-20, 1993.
- Aelion, C.M. Investigation of the relation between contaminant distribution, sediment type, and microbial activity in jet-fuel contaminated subsurface sediments. Poster presentation, Second International Symposium on *In Situ* and On-Site Bioreclamation, San Diego, CA, April 5-8, 1993.
- Long, S.C., C.M. Aelion and F.K. Pfaender. An investigation of the microbially mediated fate of the petroleum constituents decane and toluene in jet fuel contaminated aquifer sediments. Podium presentation, 13th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Cincinnati, OH, Nov. 8-12, 1992.
- Long, S.C., C.M. Aelion and F.K. Pfaender. An investigation of the potential for *in situ* bioremediation of a jet-fuel contaminated aquifer. Poster presentation, Hazardous Waste Conference, University of Notre Dame Center for Bioengineering and Pollution Control, Notre Dame, IN, Aug. 31- Sept. 4, 1992.
- Vroblesky, D.A., J.F. Robertson, M. Fernandez and C.M. Aelion. The permeable-membrane method of passive soil-gas collection. Podium presentation, Sixth National Outdoor Action Conference on Aquifer Restoration, Ground Water Monitoring, and Geophysical Methods, National Ground Water Association, Las Vegas, NV, May 9-13, 1992.
- Long, S.C. and C.M. Aelion. Metabolism of hydrocarbon contaminants by subsurface microbial communities from a jet-fuel contaminated aquifer. Podium presentation, First International Conference on Ground-Water Ecology, American Water Resources Association, Tampa, FL, April 26-29, 1992.
- Widdowson, M.A. and C.M. Aelion. Application of a numerical model to the performance and analysis of an *in situ* bioremediation project. Poster presentation, International Symposium on *In Situ* and On-Site Bioreclamation, San Diego, CA, March 19-21, 1991.
- Aelion, C.M. and M.A. Widdowson. Numerical modeling and field application to the *in situ* bioremediation of subsurface contamination at a JP-4 jet fuel spill. Podium presentation, 91st Annual Meeting of the American Society for Microbiology, Dallas, TX, May 5-9, 1991.

- Aelion, C.M. Biodegradation potential of subsurface microorganisms adapted to jet fuel contamination. Podium presentation, 90th Annual Meeting of the American Society for Microbiology, Anaheim, CA, May 13-17, 1990.
- Aelion, C.M. and F.K. Pfaender. Ability of microbial communities from a pristine aquifer to degrade xenobiotic compounds. Podium presentation, National Symposium on Water Quality, Orlando, FL, Nov. 12-17, 1989.
- Aelion, C.M., D.C. Dobbins and F.K. Pfaender. Adaptation of aquifer microbial communities to the biodegradation of xenobiotic compounds: Influence of concentration and preexposure. Poster presentation, 88th Annual Meeting of the American Society for Microbiology, Miami Beach, FL., May 8-13, 1988.
- Aelion, C.M., C.M. Swindoll and F.K. Pfaender. Effect of substrate and chemical concentration on biodegradation and adaptation by groundwater microbes. Poster presentation, 87th Annual Meeting of the American Society for Microbiology, Atlanta, GA, March 1-6, 1987.
- Swindoll, C.M., C.M. Aelion and F.K. Pfaender. Inorganic and organic amendment effects on the biodegradation of organic pollutants by groundwater microbes. Poster presentation, 87th Annual Meeting of the American Society for Microbiology, Atlanta, GA, March 1-6, 1987.
- Aelion, C.M., C.M. Swindoll, O. Jiang and F.K. Pfaender. Adaptation of groundwater microbes to organic pollutants during long term incubations. Podium presentation, 7th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Washington, D.C., Nov. 2-5, 1986.
- Dobbins, D.C., S.C. Long, C.M. Aelion, C.M. Swindoll and F.K. Pfaender. Kinetics of utilization of radiolabeled substrates by subsurface microbial communities. Podium presentation, 7th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Washington, D.C., Nov. 2-5, 1986.
- Dobbins, D.C., C.M. Aelion, S.C. Long and F.K. Pfaender. Methodology for assessing the metabolism of subsurface microbial communities. Poster presentation, 86th Annual Meeting of the American Society for Microbiology, Washington, D.C., March 1986.
- Long, S.C., D.C. Dobbins, C.M. Aelion, and F.K. Pfaender. Metabolism of naturally occurring and xenobiotic compounds by subsurface microbial communities. Poster presentation, 86th Annual Meeting of the American Society for Microbiology, Washington, D.C., March 1986.

## **SELECTED SERVICE TO PROFESSIONAL SOCIETIES**

### **Managing Editor**

*Biodegradation*, 2008-2012

### **Editorial Board Member**

*Toxicology, Pollution and the Environment, Frontiers in Environmental Science*, 2019-present

*Biodegradation*, 2002-2008; 2012-present

*International Journal of Oceans & Oceanography*, 2004-present

*Bioremediation Journal*, 1996-present

### **Symposium and Conference Reviews**

American Public Health Association Abstract Reviews, 2018 APHA Annual Meeting, San Diego, CA.

Technical Review Committee, 1997 Fourth International Symposium on In Situ and On-Site

Bioremediation, New Orleans, LA.

### **Selected Manuscript Reviews**

*ACS Symposium Series*, American Chemical Society,

*Applied and Environmental Microbiology*

*Biodegradation*

*Bioremediation Journal*

*Chemosphere*  
*Ecohealth*  
*Environmental Pollution*  
*Environmental Research*  
*Environmental Science & Technology*  
*Geoderma*  
*International Journal of Environmental Health Research*  
*Science of the Total Environment*  
*Water Environment Research*  
*Water Research, International Association on Water Quality, Journal of the International Association on Water Pollution Research and Control*

### **Selected Review Panels**

Member, American Public Health Association Annual Meeting, Abstract Reviewer, Environmental Justice and Children's Environmental Health, March 18, 2018 and March 19, 2020.

Member, National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Fellowship, Engineering, Dissertation, Predoctoral and Postdoctoral Fellowship Program, Washington, D.C., March 5-6, 2020.

Member, University of Massachusetts Medical School, Life Science Moment Fund, Worcester, MA, Oct. 5, 2010, May 9, 2012, May 19, 2013, May 15, 2014.

Member, National Institutes of Health, National Institute of Environmental Health Science, Special Emphasis Panel, R13/U13 awards, March 21, 2013.

Chair, Reigelman Award for Excellence in Undergraduate Public Health Education, Associations of Schools and Programs of Public Health, Oct. 3, 2013.

Member, Vietnam Education Foundation, U.S Faculty Scholars' Program, March 5, 2012.

Member, National Institutes of Health, National Institute of Environmental Health Science, Superfund Basic Research Program Center Awards, Durham, NC, Oct. 11-12, 2011.

Member, National Academy of Sciences and National Academy of Engineering, Jefferson Science Fellows (JSF) program, 2010, 2011 and 2012.

Member, National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Fellowship, Engineering, Dissertation and Postdoctoral Fellowship Program, Washington, D.C., March 13-15, 2008.

Member, Environmental Protection Agency, SBIR: Phase I: Innovations in Manufacturing, Washington, D.C. Sept. 11-12, 2007.

Chair, National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Predoctoral Fellowship Panel, Engineering, Washington, D.C., March 3-5, 2005, March 2-4, 2006 and March 1-3, 2007.

Member, National Science Foundation, Graduate Research Fellowship Program (GRFP), Washington, D.C., Feb. 17-19, 2000, Arlington, VA, Feb. 6-8, 2006 and Feb. 5-7, 2007.

Member, National Science Foundation, Environmental Engineering/Environmental Technology Program, Division of Chemical, Bioengineering, Environmental, and Transport Systems, Washington, D.C., Dec. 13-14, 2006.

Member, National Science Foundation. Small Business Innovation Research (SBIR), Washington, D.C., Sept. 20, 2005.

Member, National Science Foundation, Integrated Graduate Education and Research Training Program (IGERT), Washington, D.C., April 18-19, 2005.

Member, Fulbright Senior Specialists Program Discipline Peer Review Committee, Council for International Exchange of Scholars Panel, Environmental Science 2 Panel, 2003, 2004 and 2005.

Co-Chair, National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Predoctoral Fellowship Panel, Engineering, Washington, D.C., March 5-6, 2004.

Member, National Science Foundation, NATO Postdoctoral Fellowship Program, Washington, D.C., March 4, 2004.

Member, National Research Council, The National Academies, Policy and Global Affairs Division, FY 2003 Vietnam Education Foundation Fellowship Program, Washington, D.C., May 12, 2003 and 2004.

Member, The Cooperative Institute for Coastal and Estuarine Environmental Toxicology (CICEET) Grant Program Review Panel, National Oceanic and Atmospheric Administration, University of New Hampshire, Durham, NH, May 28-30, 2003.

Member, National Science Foundation, NATO Postdoctoral Fellowship Program, Washington, D.C., Feb. 15-16, 2001.

Member, National Academy of Sciences and National Academy of Engineering, National Research Council, Ford Foundation Predoctoral Fellowship Panel, Engineering, Washington, D.C., March 5-6, 1999 and March 10-11, 2000.

Member, National Science Foundation, Collaborative Research at Undergraduate Institutions (CRUI), Washington, D.C., March 13-14, 1997 and March 8-9, 1999.

Member, Associations of Schools of Public Health, Association of Schools of Public Health/Center for Disease Control Internship Program, 1995, 1996, 1997, 1998, 1999 and 2000.

Member, National Science Foundation, Graduate Research Fellowship Program (GRFP), Washington, D.C., Jan. 19, 1996 and Feb. 4-6, 1999.

Member, American Society for Microbiology, Undergraduate Research Fellowship Program, 1998.

Member, Environmental Protection Agency, Office of Research and Development, 1997 Grants for Research. Washington, D.C., June 17-18, 1996 and May 13-14, 1997.

Member, American Society for Microbiology, Undergraduate Research Fellowship Program, 1994, 1995, 1996 and 1997.

#### **Selected Ad Hoc Research Proposal Reviews**

National Science Foundation; U.S. Environmental Protection Agency;  
Virginia Graduate Marine Science Consortium; Idaho Board of Education, Specific Research Grant Program; Idaho DOE EPSCoR; Waste Management Education and Research Consortium, New Mexico; New Mexico Water Resources Research Institute

#### **SELECTED ACADEMIC SERVICE**

##### **Selected Service to the University of Massachusetts Amherst and the University of Massachusetts System:**

Member UMass Life Sciences Task force, UMass System  
Co-Chair UMass Life Sciences Task force, Subcommittee on Translation Sciences, UMass System  
Member UMass Amherst Academic Vision Committee  
Member UMass Amherst Comprehensive Science Planning Committee  
Member UMass Amherst Research Council (Provost's representative)  
Member UMass Amherst Dean's Council  
Member UMass Amherst New Laboratory Science Building Committee  
Member UMass Amherst Review Committee for Faculty Research Grants  
Member Steering Committee, UMass Medical School, Center for Community and Translational Science  
Member UMass Medical School, Board of Global Health Committee, Worcester MA



**Selected Service to the University of South Carolina:**

Member USC Salary Equity Committee  
Member USC Provost's Committee for Women's Issues  
Member USC University Committee for Tenure and Promotion (USC faculty elected), a 24-person committee that evaluates every university tenure and promotion file  
Member USC Search Committee for the Dean of the Arnold School of Public Health  
Member USC Search Committee for the Dean of the College of Engineering and Information Technology  
Member USC Search Committee for the Director of the Nanotechnology Center  
Member USC Search Committee for the Director of Sponsored Programs and Research  
Member USC Search Committee for the Director of the Center for Water Research and Policy  
Member USC Research Advisory Committee (RAC)  
Chair Subcommittee of Research Advisory Committee, Research and Productive Scholarship Awards  
Member USC School of the Environment Advisory Committee  
Member USC Environmental Advisory Committee  
Member USC Radiation Safety Committee  
Member USC Health and Safety Committee  
Member USC Faculty Senator from the School of Public Health  
Chair and Member USC Udall Scholarship Committee  
Member USC Sponsored Programs and Research Proposal Review Committee  
Chair USC Educational Foundation Research Award Committee  
Chair Arnold School of Public Health Research Advisory Committee

**MEMBERSHIP IN PROFESSIONAL SOCIETIES**

American Association for the Advancement of Science  
American Chemical Society  
American Public Health Association  
Association of Environmental Engineering and Science Professors  
American Geophysical Union, Lifetime Member  
Fulbright Association Lifetime Member  
Society of Women Engineers, Lifetime Member  
Society of Environmental Toxicology and Chemistry

**INCLUSION IN WHO'S WHO SOCIETIES**

Who's Who in America, 1994-present  
American Men and Women of Science, 1994-present  
Who's Who of American Women, 1995-present  
Who's Who of the South and Southwest, 1995-present  
Who's Who, 2000 Notable American Women, 1996-present  
The World's Who's Who of Women, 1997-present

**LANGUAGES**

Fluent French, Intermediate Spanish.